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Soviet Rocket Launching Puzzles U.S. Intelligence

Mystery Craft Given No Name or Number

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The Soviet Union launched a secret rocket from its Tyuratam cosmodrome last month that could have been an antisatellite weapons test or the first launch of a new Soviet rocket that uses liquid hydrogen fuel instead of kerosene.

So mysterious was the launch that the Soviets did not announce it or give it a name and number. The last time the Soviets sent something into space without a name and number was 1966, when they tested a rocket built to carry a hydrogen bomb for a short distance in space before descending toward a target on Earth.

The Soviets usually give a name and number to every spacecraft they launch, even their most secret satellites. The name is usually Cosmos, which the Soviets use to describe almost every unmanned satellite.

The mystery launch June 21 followed two other launches that day—Cosmos 1663 and Progress 24, a remote-controlled spacecraft that brought supplies to the Salyut 7 space station now inhabited by two Soviet cosmonauts. On June 26, the Soviets launched Cosmos 1664, resuming their numbered Cosmos series and skipping the June 21 "no-name" launch.

The North American Air Defense Command (NORAD) has given the mystery launch a name and number. They call it 1985-53-A, which stands for the 53rd object put into space this year. The suffix "A" means NORAD classifies it as a payload, not a rocket launcher. NORAD gives the suffix "B" to launch vehicles that go into orbit.

The object launched June 21 broke into three pieces. NORAD said that one piece fell out of orbit and burned up in the atmosphere June 24, and that the two other

pieces came down June 28. NORAD said the largest of the three pieces was three feet long.

The objects were in an orbit 121 miles high at its lowest point and 215 miles at its highest. The orbit was inclined to the Earth's Equator by 64.4 degrees, meaning it took a northeasterly path around the Earth only slightly off the course the Soviets use to test new rockets and satellites. This path lies directly over a highly instrumented corridor in the Soviet Union.

U.S. intelligence sources say they are baffled by the small size of the three pieces. One source said this suggests that the mystery object's launch vehicle exploded just before reaching orbit with most of the debris falling to Earth out of radar contact.

If this is so, the "no-name" launch could have been the test of a new Soviet rocket that uses liquid hydrogen fuel. The Soviets lag far behind in the use of liquid hydrogen, the most powerful liquid fuel used by the United States. The three main engines of the space shuttle burn liquid hydrogen, which is difficult to handle because it is highly combustible and must be kept super-cold at more than 400 degrees below zero Fahrenheit.

If it was not a new rocket test, one source said, it might have been a test of a new antisatellite weapon that failed or was deliberately blown up before reaching orbit.

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